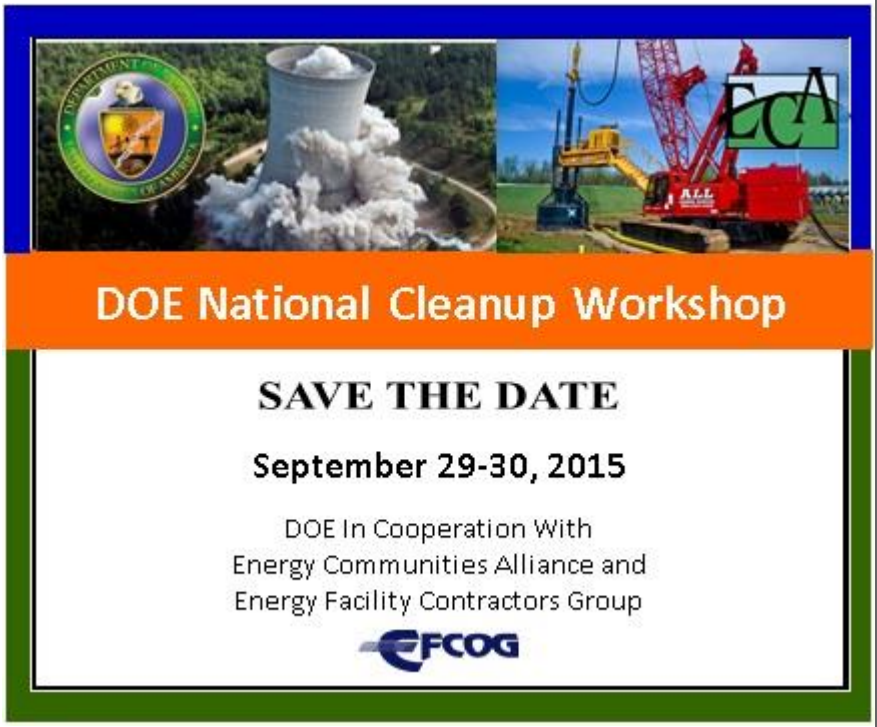
DOE National Cleanup Workshop

Cleanup Workshop - September 29-30, 2015 in Washington, DC

Manhattan Project Headquarters on Agenda
The Oak Ridger

'Los Alamos Will Never Be Clean'
The Santa Fe New Mexican



DOE, in cooperation with the Energy Communities Alliance and the Energy Facilities Contractors Group, will be holding a National Cleanup Workshop in Washington, DC on September 29-30. Speakers from DOE, Congressional leaders, experts, and local voices will be featured. More information will be shared as it becomes available.

Manhattan Project Park headquarters on agenda
The Oak Ridger
July 13, 2015
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September 29-30

The City Council will vote tonight on a resolution asking that Oak Ridge be made the headquarters of the Manhattan Project National Historical Park.

The Manhattan Project National Historical Park is set to be shared between Oak Ridge, Los Alamos, N.M., and Hanford, Wash. All three cities want to be the headquarters for the park and that competition has sparked a letter-writing campaign extolling the virtues of Oak Ridge.

In a July 2 memorandum to City Council, City Manager Mark Watson wrote, "At this time, numerous letters and contacts are being made to the U.S. Department of Interior and the National Park Service leadership, the Department of Energy, and political officials."

Those letters from Oak Ridge, Roane County, Anderson County and Knoxville mayors, and other officials were also published in The Oak Ridger on July 3 and 6.

The resolution attached to the agenda packet for City Council approval cites several reasons for Oak Ridge being made the headquarters of the park. Those reasons are listed below as excerpted from the resolution:

• The Oak Ridge site will be the largest and most complex of the three sites, with major assets on display at four or more locations throughout the city — the Graphite Reactor at the Oak Ridge National Laboratory, the new History Center and equipment building at the former K-25 Gaseous Diffusion site, the New Hope Center at Y-12, and the historic Alexander Inn Guest House; and

• The Oak Ridge site may become the most visited site due to its proximity to major interstates, population centers, and the Great Smoky Mountains National Park

'Los Alamos will never be clean'
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ACID CANYON — A dirt trail shaded by ponderosa pines drops down the slope of this small canyon below the Los Alamos Nature Center and a recreation center.

The canyon became a dumping ground during the Manhattan Project. Old pipes, washing machines, culverts and other debris from the era were tossed into the canyon by nearby homeowners and Los Alamos National Laboratory staff.

The nature center, graced by new gardens and an expansive view of the Jemez Mountains, sits near the site of a chemical waste treatment plant used by scientists who built the first nuclear weapons. From 1943 to 1964, the treatment plant shed into the canyon more than 30 million gallons of treated and untreated liquid radioactive and chemical waste laced with tritium, strontium, plutonium and other radioactive materials that settled on rocks and soil. It was one of several canyons around Los Alamos used as dumping grounds by the lab during the Manhattan Project and the subsequent Cold War.

"The scientists knew this canyon was contaminated back in the 1950s and '60s," said Greg Mello, a former inspector with the state Environment Department and now a partner in the nuclear watchdog Los Alamos Study Group with his wife, Trish. "Their children played here."

As people this year commemorate the 70th anniversary of the first atomic bomb, which helped lead to the end of World War II, often left out of the conversation is the legacy of environmental waste left behind from the making of that bomb and the thousands that followed.

Acid Canyon is among more than 2,000 dumpsites around the lab's 43-square-mile property and thousands of other dumpsites at 108 locations in 29 states around the nation where waste from the Manhattan Project and subsequent nuclear weapons research was discharged, tossed or buried.

Efforts to clean up the contamination have taken decades and billions of dollars. The work isn't finished yet, and it may never be complete in some places. Millions of cubic meters of hazardous waste still await cleanup, along with hundreds of contaminated buildings demolished or awaiting demolition at Savannah River in South Carolina, the Hanford plutonium processing plant along Washington's Columbia River, Los Alamos and a dozen other sites.

Acid Canyon, popular with hikers and bikers, has undergone three cleanup efforts in 40 years. Plutonium and other radioactive particles remain in the canyon, but that doesn't keep people from recreating there. Lab teams monitoring the canyon say the radiation levels are

below the federal standard set to protect health.

Los Alamos County employee Peter Horak and Erin Pearcy of the YMCA Earth Services Corps, along with several middle school students, recently were taking a break from cleaning up debris and working on trails in the canyon.

“There’s even old cars in some of these canyons. You’ll be building trail over near the old incinerator. Near the airport, there are 55-gallon drums we’re pulling out,” said Horak, who grew up in Los Alamos.

“Every time we work over there, we’re careful,” he said.

A legacy of waste

Air, land, water and people all were exposed to hazardous and radioactive waste products while scientists and engineers were producing the Trinity test bomb and subsequent nuclear weapons.

Uranium miners, scientists, lab technicians and people living near research facilities or test sites around the United States during the heyday of the Manhattan Project were exposed to the highest immediate levels of radiation. They’ve sought compensation from the federal government for a litany of maladies and cancers related to their work on nuclear weapons.

The waste dumped in canyons, buried in unlined trenches or discarded in out-of-the-way places has represented longer-term hazards to people living in or near places where the components of nuclear weapons were processed. In the 1980s, the U.S. Department of Energy and the Army Corps of Engineers began cleaning up the waste sites around the country.

The danger from the waste depends on its radioactivity and how much of it people or animals are exposed to. People regularly are exposed to some level of radiation, which occurs naturally in the environment, such as uranium in soil and radon gas. The legacy waste adds to natural radiation levels in the environment and, left untreated, can increase the risks of cancers and other health problems.

At Los Alamos, lab workers dumped waste in trenches and pits, including those at Area G, a 63-acre dumpsite that opened in 1957. This includes thousands of cubic feet of low-level and mixed transuranic waste such as old lab coats, tools and other debris.

Nuclear waste is exempt from many federal environmental laws such as the Clean Water Act. The New Mexico Environment Department, after a court battle, gained some measure of regulatory control over the lab's legacy waste only because it is mixed with other hazardous chemical waste. Under an agreement with the state, the lab in 2014 was on track to remove 3,706 cubic meters of hazardous and radioactive waste stored in above-ground containers and ship it to the nation's only underground nuclear waste repository near Carlsbad when a lab container ruptured at the underground facility, halting operations.

A lab official said last year LANL still had thousands of cubic feet of contaminated waste left in 35 pits and 200 shafts at Area G. "The main concern is that Area G is smack dab over the regional aquifer," said Scott Kovac, of Nuclear Watch New Mexico, noting the groundwater table is between 900 and 1,000 feet below the surface.

The Department of Energy and state environment officials are grappling with whether the increasing costs of cleanup at the lab and at other legacy waste sites outweighs the health risks of leaving waste where it is and capping it. Mello, who issued the first notice of violation to the lab for noncompliance with federal hazardous waste regulations in 1984, contemplated the trade-off: "Los Alamos will never be clean. It will always have tons of buried waste. Whether the waste is a health hazard is debatable."

Costs of nuclear cleanup

The legacy costs of the Trinity Site test and the Cold War can be counted in human and environmental price tags.

"There's been a lot of triumphalism going on about the Manhattan Project. While I understand and respect the science and the giants of scientific history involved with this, we have to balance that with other things," said Bob Alvarez, a former senior policy advisor for the U.S. Department of Energy secretary and deputy assistant secretary for national security and the environment from 1993 to 1999.

"You can't look at the 70th anniversary of the Manhattan Project in a vacuum of scientific achievement," he said. "You have to balance it out with what it has meant for ordinary people who participated."

"It is costing a lot of money, taking a lot of time, and we're leaving behind a lot of workers who have suffered," Alvarez said.

Uranium miners and millers developed lung cancer and kidney cancers, among other illnesses. Scientists and other workers exposed to radiation from above-ground tests developed cancers of the lung, thyroid, esophagus, stomach and pancreas, as well as leukemia and other maladies.

More than 107,141 nuclear research workers and their families have received some of more than $11.6 billion in compensation and medical coverage as of July 5, according to the U.S. Department of Labor. More than a fourth of workers filing claims have cancer types recognized by the federal government as ones that can be caused by exposure to radioactive materials.

More than 4,900 former Los Alamos National Laboratory workers from World War II to the present have received $566 million for health problems related to their work at the lab.

The Department of Energy says it is committed to cleaning up the legacy waste left over from more than half a century of nuclear weapons research. “There has been substantial progress in nearly every area of nuclear waste cleanup, with 91 sites completed including Rocky Flats, Fernald and Mound, which were major sites that supported nuclear weapons through the production of plutonium, uranium and tritium,” according to a statement emailed from the agency. “The Department has proven that with additional funding, it can accomplish a great deal.”

The federal department said the Office of Environmental Management was able to reduce the total footprint of its remaining waste sites by nearly 75 percent, permanently cleaning up about 690 square miles of contaminated land — an area more than 30 times the size of New York City’s Manhattan. “The remaining 16 sites [including Los Alamos] are some of the most complex and challenging missions,” the department said.

Still, the costs of cleaning up legacy waste continue to climb. The Department of Energy’s life-cycle environmental liability for thousands of contaminated facilities and management of massive quantities of radioactive waste rose to $427 billion in 2014 from $297 billion in 2006, according to the agency’s fiscal report. The life cycle includes all of the department’s liabilities until the waste is finally cleaned up to federal standards — a process still years away in some locations.

The estimated liability for the legacy waste is higher than the

combined state budgets of New Mexico, Texas, California, Arizona and Colorado.

The total life-cycle costs of managing environmental cleanup of legacy waste at Los Alamos were estimated at $2.9 billion in the Department of Energy's fiscal year 2016 budget request to Congress. For Hanford, it is $63 billion, and for the Savannah River site, it is $71 billion.

"We keep on spending and yet the estimated environmental liability keeps growing," said Jay Coghlan, executive director of Nuclear Watch New Mexico.

Cleaning a canyon

Acid Canyon was the kind of place where Los Alamos kids loved to play, ride bikes and build forts before there was any effort to clean up the radioactive waste. Cleaning it up has been an ongoing challenge, as it has been at so many of the legacy waste sites around the country.

In 1966, the U.S. Atomic Energy Commission started cleaning it up so the property could be turned over to Los Alamos County. Crews decontaminated parts of the canyon wall and removed contaminated rock and soil from the bottom of the canyon. The area was deemed clean and turned over to the county "without restrictions" on July 1, 1967.

A decade later, two "hot spots" — areas with radiation levels higher than accepted health standards — were found. More soil was removed and that cleanup was finished in 1984.

The county built a skateboard park at the site of the old wastewater treatment plant in 1997. In 1999, the lab found hot spots with plutonium contamination in the canyon bottom, where a stream cuts through. The trails and park were shut down while the lab spent $1.2 million to remove 480 cubic yards of sediment from the canyon floor. The canyon reopened in 2001, and the lab declared levels of plutonium acceptable under federal radiation guidelines.

Periodically, after floods, monitors register higher levels of radiation in the canyon bottom.

Solar-powered stream gauges and water monitors now sit in the bottom of Acid Canyon and nearby canyons. The monitors are supposed to alert the lab when floodwaters come through that could

push contaminated sediment down into the Rio Grande and downstream to a diversion that sends river water into Santa Fe's drinking water system.

Horak and Pearcy both grew up in Los Alamos. They remember learning about the Manhattan Project and the bomb in school. "They never really told us much growing up about the waste in the canyons, until I started working on Acid Canyon," Pearcy said. "I don't think they really addressed it when we were in school."

As far as they're concerned, there are bigger things to worry about.

"I don't think it is as bad as people think it is," said Horak, who also rehabilitates injured wildlife with his veterinarian mother, Kathleen Ramsay. "What we're getting more impacted by now than waste is climate change."